The MAC Flyer

JULY 1976

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The MAC Flyer

For Greater Efficiency
in MAC Air Operations

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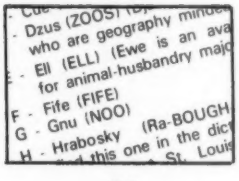

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Contributions, comments, and criticisms are welcome. Write: The Editor, THE MAC FLYER, MAC/IGFE, Scott AFB, IL 62225, or call: (618) 256-3534, Autovon 638-3534. The editor reserves the right to change manuscripts to improve them or correct technical errors.

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Flyer Call

You can see by the cover that this is our special bicentennial issue. We received lots of help from our readers in putting this issue together. The staff of THE MAC FLYER renders a special thanks to those of you who sent pictures, articles, ideas, and war stories for what we hope is a spectacular issue.

While we're "giving thanks," we've got to say something about the participation in this year's Flying Safety Writing Contest. It was far beyond our expectations. The number of stories and the quality of writing were such that the editors are in fear for their jobs. So thanks to you all in making our contest a success.

Even if you didn't enter the writing contest, don't feel that you can't have your say. THE MAC FLYER is a journal for MAC aircrew members—it's your mag. If you see something you don't like, tell us about it and we'll try to do better. And don't be afraid to take pen in hand and write us a story. Manuscripts from the field are welcome and help lend perspective and credibility to the pub—so let us hear from you.

Bicentennial Message

Two hundred years ago, the newly emerging country in the world arena was headed up by a small band of renegades. They insisted on calling their creation "The United States of America." They were laughed at and scoffed at, these rebels. Expounding such high ideals as democracy, patriotism, and fundamental freedom for all, this band of revolutionaries would not obtain the freedom they sought by merely petitioning their exploiters—they would have to fight and defeat the adversary on the battlefield. On the battlefield, not in the assembly.

And once that war was won, the battle was *not* over. In the ensuing two centuries, the spirit of this still young country would be tried, and tried again, but never broken. The composite strength of a stubborn and idealistic people, of their industrial might, and of the fighting men willing to subordinate their interests for the good of all, has made and kept the country alive and viable.

Challenges are made and accepted by statesmen, but it is the warrior who must enter the arena, prepared to defend those ideals. And in the end it has been the fighting man who has made the supreme sacrifice—who gave his life in exchange for the welfare of others. But that is expected—his profession was, and ours is, a profession of arms.

It is fairly safe to assume that the United States would not exist as we know it today had it not been for the many minutemen, soldiers, sailors, marines, and airmen who selflessly stood and fought the enemy. Many died; many more received disabling injuries. We stand tall and strong and alive today because of those mightiest of men. And I am proud to stand among *you*—the mightiest of men and women.

Today, the people of the Military Airlift Command stand ready. A combat seasoned rescue and medevac capability and the most responsive tactical and strategic airlift force on the face of the earth did not occur by chance. Consider the contributions of a crack meteorological service and the maintenance troops who "keep 'em flying;" it's all documented by our AAVS people. Both support and operations personnel have worked hard, spent long hours, and continuously given more than was asked so that this command could be honed to a fine edge of readiness. Yes, *you* have done that. Be proud.

No one can predict how the international geopolitical scene will look in the future. But we know one thing that won't change much—the profession of arms. Yes, equipment will change, uniforms and styles may give us a different appearance, but the character of the defender must and will retain the strong spirit of the patriots of old.

I see many future leaders among you men and women of MAC—young, capable NCO's and officers, ready to step up. And you'll do a better job than your predecessors. No, leadership in the future Air Force will not be a problem. Of that, I am confident.

As our nation celebrates her two hundredth birthday, you should be proud, very proud, to be a part of that composite strength that made and keeps our nation free. You are standing in the shoes of the minutemen of old.

Paul X Carlton

Writing Contest Winners

1976 MAC Flying Safety Writing Contest

"The Systems Analysis Approach to Flying Safety, of Sorts," by Maj Roy Ryon of the 1551 FTS, Kirtland AFB, N.M., won top honors in the 1976 MAC Flying Safety Writing Contest sponsored by THE MAC FLYER.

Major Ryon's winning entry analyzes all the factors associated with flight safety, in a completely scientific manner (so he says). You're due for a real treat when you study "old Shep's" patented formula for longevity.

Second place was captured by Maj David M.H. Sibbald, a Reservist with the 709 MAS (Associate) at Dover AFB, Del. "Mm, Hoom. Scroom." eavesdrops on an old MAC AC as he's bending a new pilot's ear. Somewhere around the third martini, the old salt thinks he's solved the problem. Maybe he has.

Maj Patrick S. Boab of the 133 TAW (ANG) at Minneapolis-St. Paul IAP, Minn., wrote the third place winner. "Tiger One" is a story about a tight-lipped crew that didn't tell all—for that matter, didn't tell anything—about a close call they had. The actors later spent many sleepless nights, when Fate was not so kind to their fellow aviators.

This year's contest was one of the most successful ones we've run in our recollection. We selected the maximum of nine Honorable Mentions and the competition was really heavy! When the dust settled, it looked like this: "What Do You Say to a Guy with 8,000 Hours?" by Capt Michael E. Humphreys, 1551 FTS, Kirtland AFB, N.M.; "Zero Hour" by Capt. Derek L. Duke, 300 MAS (Assoc), Charleston AFB, S.C.; "Is Danny O'Keefe Qualified . . . Yet?" by Capt Richard L. Cecil, MAC/XP, Scott AFB, Ill.; "The SOD" by Capt Jerry M. Brewton, Det 4, 37 ARRS, Little Rock AFB, Ark.; "Pride Goeth Before the Fall" by Maj Norman G. Golden, 1551 FTS, Kirtland AFB, N.M.; "Luck, Skill, or Divine Intervention?" by Lt Col Jay M. Strayer, OL A, 1550 ATTW, Hill AFB, Utah; "The Saddest of Things" by Capt William R. Losey, 9 MAS, Dover AFB, Del.; "Attached to Flying" by Capt Lewis A. Hoffman, 438 MAW, McGuire AFB, N.J.; and "Touchdown, 600 Feet Before Minimums" by Capt George O. Brewer, 9 MAS, Dover AFB, Del.

Authors of the first three winning stories will receive engraved walnut desk sets. Honorable Mention winners will be awarded engraved walnut wall plaques.

The articles were judged on the basis of their flying safety message, originality, suitability for publication in the magazine, interest to readers, readability, quality of writing, and conformity to instructions published in THE MAC FLYER.

A winning entry will be published in THE MAC FLYER each month, beginning with this issue.

by Major Orlen L. Brownfield
Associate Editor

Airlift on Trial

AAF 76

On the first of June 1948, the Military Air Transport Service (forerunner of the Military Airlift Command) was born. In the following year this infant organization would experience baptism and maturity in rapid succession. The Berlin Airlift represents a major bench mark in airlift history, keeping more than 2,000,000 West Berlin citizens alive and free. Their only "Lifeline to Freedom" came from the sky.

The ashes of World War II were still smoldering in the minds of soldiers and statesmen alike in June of 1948. Russia's "sabre rattling" was ominous as the Soviets withdrew from the four-power control of the city of Berlin—a city completely surrounded by Communist East Germany.

In the week that followed, the Soviets indicated their determination to win control of the entire city. Rail traffic from West Germany to Berlin was stopped by the Russians, postal service suspended, and surface transportation halted due to "repairs." Finally Berlin was denied electrical power. The total blockade of the "free city island" had been accomplished. Or had it?

Was there an alternative short of a face-to-face engagement? Airlift? It had never been done. Could it be accomplished? Could a city of nearly two and one-half million be supplied food, water, and fuel with a handful of C-47's? Yet airlift seemed like the only answer short of war.

How Much?

Joint planners studied the needs of the free sectors of the blockaded city. They estimated that eight to nine million pounds of material would have to be flown into Berlin's two airports *daily*. Stick that in your Gooney Bird!

The last rail shipment reached Berlin on 21 June 1948. Surplus stores carried the city for a time. On 26 June the first C-47 departed Rhein-Main for Berlin and in the succeeding 24-hour period 160,000 pounds of milk, flour, and medical supplies were hauled into the beseiged city.

"Chairborne" aviators were some of the first to participate in Operation Vittles, the U. S. effort. Those staff officers and NCO's frequently worked regular eight-hour days and were relieved, not to go home to the wife and family, but to fly the Berlin Corridors.

Planners envisaged meeting the requirement by overgrossing the Gooney Birds and making a delivery every three minutes 36 seconds, around the clock. This would provide the bare essentials—fuel for lights, but none for heat.

Less than a week after the inaugural flight, British Yorks and Dakotas began servicing the British sector and Air Force C-54's landed at Rhein-Main to join the airlift. Coming from such faraway places as the Philippines and Australia, the C-54's more than doubled the airlift capability. By the 15th of July, U. S. and British aircraft were delivering more than three million pounds of essen-

tial supplies per day.

MATS Takes Over

On 23 July 1948, the Military Air Transport Service was ordered to take command and control of Operation Vittles. By autumn, the airlift reached 4,000 tons per day.

The problem now seemed to be "not enough room at the inn." In Berlin, both Tempelhof and Gatow airdromes became saturated. These being the only suitable landing sites, it seemed that the airlift had reached its peak. The French suggested a site at Tegel in their sector. At first this was ruled out as unfeasible, since much improvement would be necessary. Heavy equipment was not available, and the number of laborers to do the work would be prohibitive. So the allies thought.

But Berliners volunteered in droves—20,000 of them to work three shifts daily in order to complete the almost impossible task of making Tegel an operational airdrome by December 1948.

One big problem at Tegel was a radio tower located on the final approach course *in the Soviet zone.* General Jean Gavanel, commander of the French zone, asked the Russians to remove it. They refused. He marched in with a demolition team and blew it up, and the timetable was met.

With all three airports in full operation, Berlin was now becoming the best supplied city on the continent. MATS was providing CONUS - to - Europe airlift with its C-121's and C-74's, and by spring, Operation Vittles was delivering an average of over 8,000 tons daily. On one peak day, a record 13,000 tons was delivered. Impressive? This equates to 150 C-5 missions with max allowable cabin loads.

Air Traffic Control

Initially, aircraft operating in the corridors were flying at six different altitudes between 5,000 and 10,000 feet. As control improved, only two altitudes were used, with aircraft flying six minutes in trail at the same altitude and three minutes between birds in the corridor. With such close tolerances, each aircraft could attempt only one approach to a Berlin airport. When a missed approach was executed, the aircraft was sent to an alternate in West Germany. With these guidelines, it became obvious that weather would play a very significant role in the success of Operation Vittles.

Air Weather Service furnished long- and short-range forecast for the planners, while a network of local forecasters linked by telecommunications provided crews with instant weather reporting and observations. When visibility was reported at less than one mile, a weather observer was sta-

C-74's and C-121's (below) provided CONUS-to-Europe airlift for Operation Vittles.

tioned at the approach end of the runway, counting the visible runway lights and relaying the information to the weather station via field telephone.

GCA Saves the Day

Due to marginal weather, a most significant factor in getting the aircraft safely on the ground in the free sectors was the GCA people. Twenty civilian operators were flown into Berlin to operate the GCA's and train military personnel. Running on a tight schedule, even in good weather, required near-perfect spacing on final. On and off loading, ground handling, and air traffic control were based on the three-minute arrival schedule.

Little Vittles

The most publicized of all items flown was the candy dropped to the children who gathered in the vicinity of Tempelhof airdrome. It was an unofficial operation dubbed Little Vittles and the brainchild of Air Force Lieutenant Gail S. Halversen, assigned to the 17th Air Transport Squadron. He started the unofficial resupply operation by attaching candy to small parachutes and tossing it out the open window of his aircraft. Little Vittles spread like wildfire among the aircrews flying the corridor. In December 1948, they mounted a new effort: Operation Santa Claus. Day and night, thousands of tiny parachutes floated down bearing gifts from the unseen aviators. Every toy, every doll, every piece of candy was bought by the crews and their friends back home.

Airlift the Victor

On 12 May 1949, less than a year after they had closed off the city of Berlin, the Soviets ordered the blockade lifted. They had failed. They could not starve the free sectors into Communist orbit, and the crisis was over without confrontation. Though the adversary had succeeded in cutting off rail, road, and river traffic to the besieged city, an aerial blockade was impossible. The newly formed Military Air Transport Service had experienced birth, baptism, and maturity in that short year and emerged as a global airlift force.

C-47's carried 160,000 pounds of needed supplies the first day.

MATS C-54's operated by Navy and Air Force crews were the mainstay of the U. S. effort.

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Special thanks to Col Laverne E. Rosene, USAF (Ret), for a firsthand account of the airlift. Colonel Rosene was one of the "chairborne" pilots who participated in Operation Vittles.

The Ghost of

by Maj Grover C. Tate, USAF (Ret)

In search of something really appropriate for our Bicentennial issue we filtered the stacks of old TMF's. Definitely a MAC classic, "The Ghost" (first published over ten years ago) is sure to cause a twinge of nostalgia among the older MAC linesters. The Drifter's Reef has long since gone the way of METO power, Intermediate Level Airways, and the K2B. The safety message is still as appropriate as ever, and should the relatively new MAC types have questions concerning terminology, places, and faces, we suggest you stop the first aircrew member wearing a 10,000-hour patch. That is, if you're ready for a few fond recollections of the "Good Ole Days."

A bunch of MAC flyers were whooping it up
On the shore of the Wake Lagoon,
Gathered together for story and song
In the Drifter's Reef Saloon.

Grousing at rules that kept them there
Instead of in Hono-lu;
Counting the hours remaining to drink
(How many? It's twelve plus two.)

When out of the rain and storm of the night,
And into the white lamp's glare,
There stumbled a man in raggedy greens
With sand in his beard and his hair.

He looked like a crewman because of his garb,
This salt-crusted, storm-ravaged guest.
Some threads from a MAC patch, so faded and torn,
A sharp eye could find on his chest.

The place grew quite still as he walked to the bar
and croaked out an order for gin.
Then, clutching his glass in his coral-scarred hand,
He eyed every man jack therein.

His eyes were of green, like the depths of the sea,
And they looked as though set in a well.
And those orbs had a message for all who could see
That this man knew the torments of hell.

Drifter's Reef

The hand raised the glass, and his lips found the rim;
A thin trickle poured down his chin.
Then, smoothing his beard with the back of his wrist,
He coughed and said, "Let me begin."

"It all started back in the days of cadets,
In the years before black shoes and blues.
Instead of me choosing to fly like a man,
I majored in women and booze.

"I guess I was lucky; I know I got help,
And somehow I made my way through.
Then one sunny day someone pinned on my wings
And told me, 'It's all up to you.'

"Of all of the places I could have been sent,
Like Training Command, TAC or SAC,
They gave me the job that I wanted the most—
I'd spend my years flying for MAC.

"And when I checked in, oh! so eager to start,
They scheduled me back into school.
But I was a hot rock and I knew it all,
So I spent my time at the pool.

"To heck with procedures for three-engine climb,
It's easy to see we've got four,
Just line up this beast with the wind on her nose
While the engineer lays on full bore.

"Who cares, reasoned I, where the fuses are hid,
Who cares for the words that spell PAM?
Just show me about where the throttles are at,
And it's off to the blue, like Shazam!

"It's never my worry to preflight the bird;
Leave that for the maintenance toad.
And get him to sign off those silly red marks;
We must get this show on the road.

"And all of this jazz about planning the flight!
Half-way makes a good E-T-P.
Just tell me, old boss, where the cargo must go
And then leave the flying to me.

"At last I returned to my unit again,
And begged them to please let me fly.
They needed a man on that very same eve
To go bore a hole in the sky.

"The night was as black as a coal miner's sock,
When our plane roared away toward the sea.
The nav stuck his hand through the drapes at my back
With a message to give M-C-C.

"I glanced with surprise at the words on the sheet
Which the 'gator said *had* to be sent,
Cuz the place we were going was known to all hands,
And so was the time we had went.

"So I laid it on top of 'Procedures, Enroute,'
And wadded them all in a bunch,
Then tossed it aside while I leveled her off
And called for my first in-flight lunch.

"In the mellow white light from the thunderstorm lamp
I glanced at the man 'cross the aisle.
I knew in a flash that we'd sure get along,
'Cause his face held the trace of a smile.

"His arms dangled down by the side of his seat,
His chest made a rest for his head.
The sound of his snores as we bored through the night
Gave me confidence I couldn't shed.

"It was only an hour, as best I recall,
When: 'Pilot, we've lost number two'
Came crackling over the interphone wire;
I *instantly* knew what to do.

" 'Press on,' I replied, in my best pilot tone,
'Four minus one still leaves three.'
'But, sir,' came the voice of our first engineer,
'Let's go back to Travis, prithee?'

" 'Quite right,' said the 'gator, quick joining the fray,
'The book says go back toward the sun.'
'What book, lad?' I asked in a fatherly voice.
His answer: 'MAC fifty-five one.'

" 'The equal time point still lies over our nose;
Make a one-eighty, please,' cried the nav,
'We're going to Hickam, Magellan,' I yelled,
'And no more of your lip will I have.'

"The silence right then was a welcome relief,
And for minutes the feeling was grand.
Then a voice said, 'Our fuel isn't going to last,
You better start looking for land.'

"Then the 'gator climbed in with a worrisome note,
'Pardon me; you're three AIREP's in debt.'
I took a deep breath, then in leadership tones,
Answered, 'Gentlemen, negative sweat.'

"Behind us the dawn was attacking the night;
We flew on in an ocean of gray.
Clouds which had covered the stars from our sight
Now were hiding the sun the same way.

"The man on my left shook himself from his snooze
And requested the last status quo.
I flashed him the sign that *okay* was the word
And we had only three hours to go.

"I told him one engine was taking a rest,
And fuel was not overly fat,
But we had a heading that seemed mighty good,
And he could take comfort from that.

"I mentioned the AIREP's that hadn't been sent,
The radar that acted so sick.
The fact that the 'gator had lost his Loran,
The radio's clickety-click.

"I knew by the way that he sagged in his seat,
That to him it must all be a joke.
('Twas later I learned, from a medical tech,
That the poor chap had suffered a stroke.)

"To wrap it all up in a couple of words,
And to save you the gory remarks,
We DR'd our way to some ATC steers
And we managed to outfox the sharks.

"I greased in the bird on the runway they named,
Then taxied her in to the ramp.
The fellers who met me when I touched the ground,
Had hands awful clammy and damp.

"They read me the regs I had broken and bent,
They showed me the rules I'd ignored.
They hit me with everything under the sun,
And left me, quite lit'rally, floored.

"They tied me with chains on my hands and my feet;
I was laid in a casket-like box.
Then they fastened the lid with a handful of spikes
And they wrapped on more chain, using locks.

"Ten hours in the back of a one-twenty-four,
Then they pitched out my 'coffin' near Wake.
The box split in two as it hit on the reef,
And I floated ashore like a snake.

"No one sees me here but the members of crews,
'Cause to them I'm a lesson retold.
I only appear in the dark of the night,
When the weather is low, damp and cold.

"And so, my MAC friends, buy me something to drink,
Heed my story of ruin and rack.
Remember the man who goes forth without smarts
Will eventually never come back."

He paused; in a flash someone refilled his glass
And he gulped down the drink with a smile.
Then he left as he came, in a flurry of wind,
For his home on the tiny Wake isle.

I am sure he's still there, this outcast from a crew
With his raggedy greens and his beard.
And whenever you sit in the Drifter's Reef Bar
Keep an eye peeled for something quite weird.

For I reckon he'll never be able to leave
Until all of our men get to look
And to hear him recite his sad, heartrending tale
Of the man who knew more than The Book.

When does MAC become Mnemonic Aardvark Cue? Read on.

Phrenetic Phonetics

While browsing through our archives recently, we came across a proposed ICAO phonetic alphabet. Unfortunately, we were unable to identify the author, who was obviously a genius. But a quick perusal of his work and a few minutes with our Funk & Wagnall's revealed the tremendous value of his proposal.

Although the current ICAO phonetics are indeed easy to pronounce, readily distinguishable, and well designed for the purpose of delivering a message through the crash and roar of HF static, they simply aren't interesting—which may account for the failure of so many communicators to use them properly. We feel that the following list, drawing as it does upon the magnificent richness and variety of the English language (among others), is far more likely to make a lasting impression on one's mind. The words are listed with their pronunciations for ease of application.

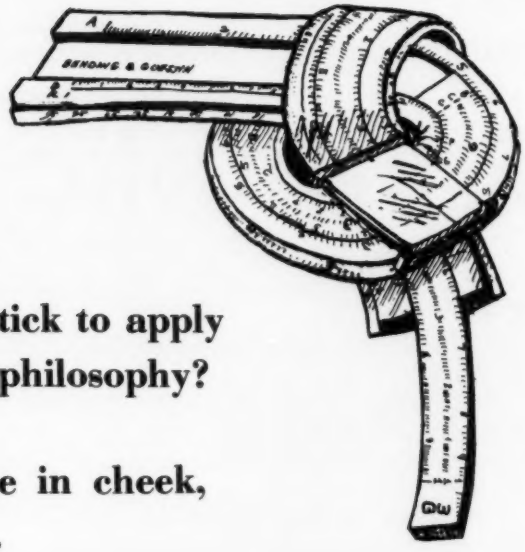
TMF PHRENETIC ALPHABET/ SANS MORSE CODE

A - Aardvark (AHRD-vark)
B - Bdelium (DEEL-ee-yum)
C - Cue (KYOO)
D - Dzus (ZOOS) (Djakarta is optional for those who are geography minded.)
E - Ell (ELL) (Ewe is an available alternative for animal-husbandry majors.)
F - Fife (FIFE)
G - Gnu (NOO)
H - Hrabosky (Ra-BOUGH-skee) (You won't find this one in the dictionary. Check with your nearest St. Louis Cardinals fan for further information.)
I - Iago (YAH-go)
J - Jalapeno (Ha-la-PAYN-yo)
K - Knew (See Gnu)
L - Llama (YA-ma)
M - Mnemonic (Nee-MON-ik)
N - Nein (Check with Frankfurt Radar for pronunciation.)
O - Oedipus (ED-i-puss)
P - Ptarmigan (TAR-mi-gan)
Q - Que (KAY) (Should be pronounced in a questioning tone.)
R - Rhyparography (Rye-per-OG-ra-fee) (We really didn't understand why this one was included until we looked it up.)
S - Sea (SEE)
T - Tsar (SAHR)
U - Uighur (WEE-grr)
V - Vatman (VAT-man) (Be careful to enunciate clearly here.)
W - Write (RITE)
X - Xerox (ZEE-rocks)
Y - Ypsilanti (You'll have to ask someone who lives there how to pronounce this one.)
Z - Zwanzig (TSVAN-tsig)

The advantages of this system become obvious when you apply it to some typical aviation terminology. For example, Echo Tango Alfa is not nearly as scintillating terminology as Ell Tsar Aardvark; and if you're flying that famous Swiss Navy aircraft, the N2F, you'll be delighted to find you're a Nein-Two-Fife pilot. Try a few of your own; the possibilities are endless.

We don't recommend use of the TMF Phrenetic Alphabet when engaged in radiotelephony, as it will probably take considerable time for the responsible officials to give approval. However, we believe it may serve to entertain you in those few spare moments when you're not updating your manuals, shining shoes, or watching for Vatman Fife Rhyparography traffic.

by Maj Roy A. Ryon
1551 FTS
Kirtland AFB, N. M.



Looking for a yardstick to apply to the flying safety philosophy? Well, here it is. Simply insert tongue in cheek, smile, and study . . .

The Systems Analysis Approach to Flying Safety, of Sorts

Like that title? I know, your immediate reaction is, "Oh, no, not one of those. Where are the war stories? Where is C.R. Terror? This 'Shep' character must be one of those slide rule artists who spent his entire career at AFIT or on the staff at the War College. Probably likes computers more than he likes girls."

Well, don't be hasty. I'm going to make all those terms that you keep running across in the Command and Staff books easier to understand so the average "stick" can see how they apply to his flying machine and to his safety.

First, let's define the term "systems analysis." (See, he's starting it already; I knew he liked computers better.) According to E.S. Quade in an article on public administration:

Broadly speaking, any orderly analytic study designed to help a decision-maker identify a preferred course of action from among possible alternatives might be termed Systems Analysis.

Okay, okay, now that's not as tricky as it looks. Putting that in pilot-talk, it really means, "Look at the problem closely and consider the alternatives and consequences before you act." (So what? Big Deal! Probably likes computers as much as he likes girls.)

Well, gentlemen—and here comes the good part—throughout my many years in institutions of higher learning and through my many nights of burning the midnight oil over volumes of Command and Staff courses (I've still got four volumes in absolutely mint condition if anyone wants them), and after numerous flying experiences, the light has dawned as to what all this systems analysis, systematic problem analysis, and organizational measurement junk means and how I could apply it to our profession—flying. The final result is:

Formula Q

(Patent pending)

This formula states in simple terms:

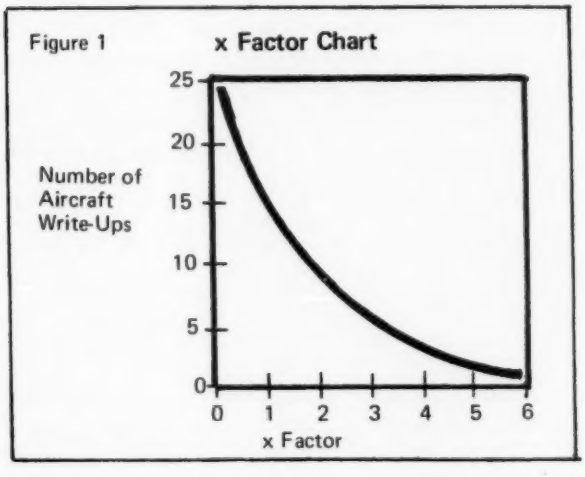
$$Q = \frac{xy}{w}^{2} \times n \times \frac{1}{c} \times \frac{1}{p}$$

(In simple terms?! I'm glad he didn't state it in complicated terms. I knew he liked computers.)

Now before you throw this article in the trash, hear me out. Let's analyze Formula Q. After all, many people scoffed at $E = MC^2$ when it was first published. All of us great minds are laughed at one time or another. This is the analysis of Formula Q:

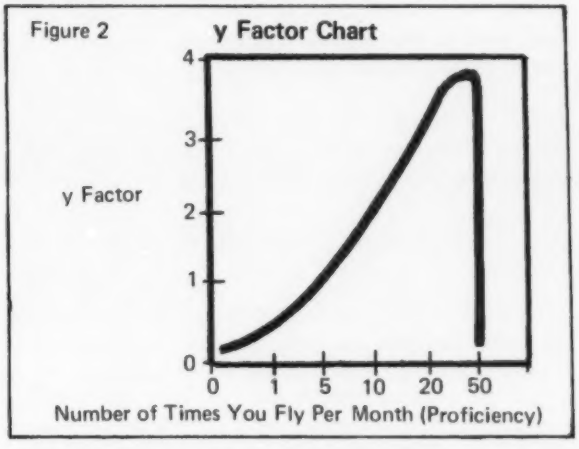
1. *Q*=your flying longevity factor. In Formula Q the idea is to maximize this factor. The greater the number, the greater your chances of living longer. Simple.

2. *x* = the condition of your aircraft or how many writeups you are willing to accept and still take the aircraft. Now this function can be graphed. After years of careful research, but mainly because I thought of it about five minutes ago, the graph for the x factor of Formula Q would look like figure 1.



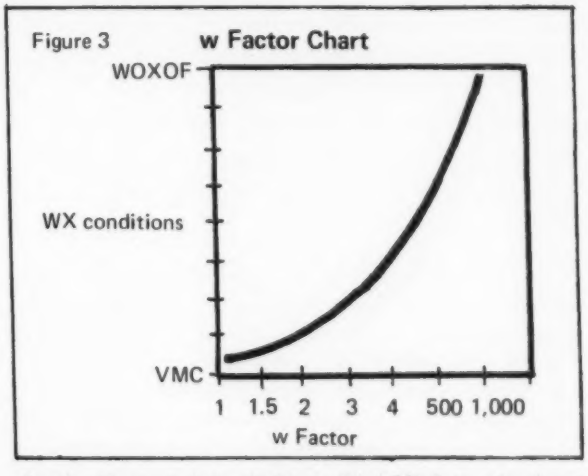
Now it can readily be seen from this graph (if you have a Ph.D. in nuclear physics) that the more aircraft write-ups you have, the lower your x factor and, therefore, the lower would be your *Q*. To put it in simple terms for you pilots who majored in dead languages at West Cupcake University, if you consistently take a crummy airplane, you will probably not live to enjoy the Bicentennial.

3. *y*= your proficiency in your aircraft. This is one of the most important factors in Formula Q, which is the reason I've decided to square it in the formula. No matter what other factors you have against you in Formula Q, proficiency, the *y* factor, can get you out of many boxes. This factor is most relevant to the attached weenies who fly only once a month. From my scientific deductions, the graph for the *y* factor would look like figure 2.



From this graph it again can readily be seen (sure, sure) that if you fly more you are more proficient and therefore increase your *y* factor, which has a direct relationship on increasing your Q factor. Note that the *y* factor is valid only to a point. If you fly over 50 times a month, your *y* factor is always equal to zero. This is because you are dead from exhaustion. In summary, the more you fly the more proficient you become and the better your chances of drawing your retirement pay.

4. *w* = your weather factor. Now this factor is obvious to all pilots, but have you ever thought of it in scientific terms? From a purely analytical viewpoint, the *w* factor of Formula Q would graphically be depicted by figure 3.



Again, the graph is obvious. (Huh??) Even the best "stick" can't cut a zero-zero ceiling. The graph

just illustrates that the closer you get to WOXOF weather, the higher will be your *w* factor, and thus your overall Q factor will be lowered. In simpler terms, if you try to punch through a zero-zero ceiling, your Q factor will also be approaching zero-zero. Enough said.

5. *n* = your night factor. From in-depth research and by talking to some guys at the bar, the following values for *n* have been derived:

Day: $n = 1$ Night: $n = 1/2$

These values are based upon the scientific observation that you can, at best, only see half as well at night, given the same weather conditions.

6. *c* = your combat factor. For peacetime operations, this factor will equal one ($c = 1$). The only exception would be for the space guys at Edwards flying the manned guided bullet.

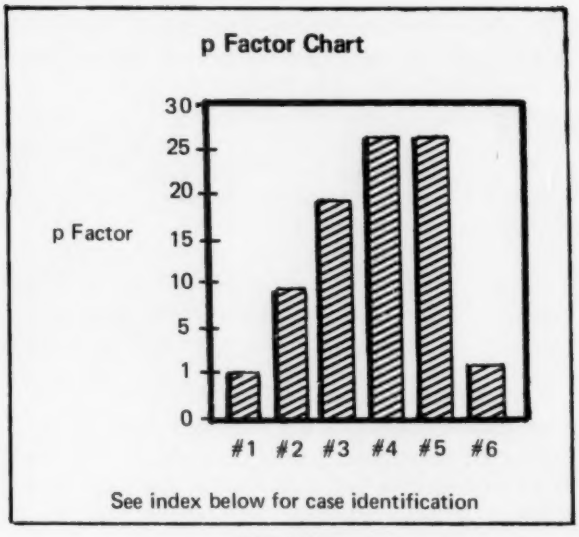
For combat operations, the *c* factor can vary greatly with the aircraft and mission. Each pilot can establish his own value for *c* by either talking to the old heads or flying a few missions. Some typical examples derived from the Big War are illustrated below:

c Factor Chart

Aircraft	Base	Mission	c Factor
T-39	Saigon	VIP haul	2
C-140	Clark	Nav flight test	2
F-105	Korat	Bombing downtown Hanoi	500
HH-53	DaNang	Rescuing F-105 pilot from downtown Hanoi	750

From these examples it can readily be seen the impact that the *c* factor would have on lowering your Q factor.

7. *p* = your physical factor. It would seem obvious that if you have a heart attack and pass out on final and are solo then your Q factor will rapidly approach zero. (Estimated time based on a 300-foot per minute rate of descent: .706 minutes.) For this reason, the *p* factor must be considered in Formula Q. Graphically, based on scientific evidence found in volumes I and IX of *Spiderman Magazine,* the *p* factor can be illustrated thus:



Case Index

Case #1 = Mark Spitz—age 20.

Case #2 = Overweight senior captain whose favorite hobby is smoking cigars while he watches all the football games—age 30.

Case #3 = Overweight major who smokes cigarettes while he watches everything on TV—age 36 (looks 45, feels 65).

Case #4 = Overweight lt colonel who smokes two packs of cigarettes a day worrying about whether he's going to make full bull; no hobbies, works all the time—age 40.

Case #5 = One-star general assigned to the Pentagon.

Case #6 = Wives of Cases #2, #3, #4, and #5.

From this illustration of the *p* factor, it can readily be seen that as the *p* factor increases, your overall Q factor will be reduced. In simpler language, the better physical condition you are in, the longer you will probably live.

Now that we have carefully analyzed the various elements of the remarkable Formula Q, we are ready for some direct applications. From my vast piles of research material (you can believe me, it is in piles), I have selected two case studies for analysis to illustrate Formula Q's practical applications.

Case Study #1 - Major Jockstrap Thunderstreak

Major T flies with the Thunderbirds and thus has some of the best maintained aircraft in the Air Force; therefore, his *x* factor = 6. He also flies at least five times a week; therefore, *y* factor = 4. He

is restricted because of the acrobatics to flying only in the best weather; therefore, $w = 1$. He doesn't fly much at night (ever see a night air show??); therefore, his n factor = 1. Major T does not smoke, he runs five miles per day, and his favorite hobby is breaking push-up records (he reportedly does like girls); therefore, his p factor = 1. Taking these factors and substituting them into Formula Q we obtain:

$$Q = \frac{6(4)^2}{1} \times 1 \times \frac{1}{1} \times 1$$

$$Q = .96$$

Obviously, Major Thunderstreak's Q factor, or flying longevity factor, is very high and if he maintains his present factors within the Q formula, he can expect a long, successful flying career.

Case Study #2 - Lt Flakey Rudder

Lt R recently graduated from pilot training in the bottom one percent of his class and slept through the seminar on the importance of reading the aircraft forms. He has developed the habit of just signing off the forms and not writing up anything if he can get the aircraft back; therefore, his x factor = 1. Because of his additional duties as Wing Widget Officer and Unnecessary Reports Officer, he flies only once a week on the average and then only as a copilot; therefore his y factor = .5(at best). Because Lt R is assigned to Snowy AFB, most of his flying is done in marginal weather; therefore, his w factor - 750. Because Lt R is so busy with his additional duties, the majority of the time he has to fly at night to maintain currency; therefore, his n factor = 1/2. Lt R is not currently flying in combat (he missed the war by being washed back in pilot training); therefore, his c factor = 1 (the kid had to have something going for him). Lt R lives in the stag bar where he smokes non-filtered Camels and his favorite hobbies are reading *Playboy* and making pizza; therefore, his p factor = 15. Applying Lt R's statistics to the Q formula, we have:

$$Q = \frac{1(.5)^2}{750} \times \frac{1}{2} \times 1 \times \frac{1}{15}$$

$$Q = .000011$$

Lt. F. Rudder was buried at Arlington National Cemetery on 28 November 1975. The results of the accident investigation are not yet final because most of the aircraft has yet to be located. Witnesses saw nothing because the ceiling and visibility that night were zero-zero; they did hear five separate explosions. All other crew members parachuted to safety; they bailed out when Lt Rudder took the controls after the pilot got sick. Radar noted a vertical streak on the scope and monitored one radio call which sounded like, "You've got it." It was estimated that parts of the aircraft hit the ground at Mach 2—not bad for a C-47. The MAC Commander has directed the Command Chaplain to send three crosses to Snowy AFB—looks like they will be needed if the supervisory error indicated in the preliminary report is indeed proven.

Well, gentlemen, that pretty well sums up my case. Beyond a doubt, Formula Q has been proven to be absolutely valid. Why not try applying it to your particular case and checking the results? Bye, now, I've got a hot date tonight with a Univac 5000. (I knew it! I knew he liked computers.)

Formula Q may be tongue-in-cheek, but the variables are quite valid. Think about them.

"Old Shep"

P.S. In future articles, I will be discussing "Decelerating Through Solid Rock and Its Aspects" and "The Lunar Tables and Field Grade Flying."

ABOUT THE AUTHOR

Major Ryon joined the Air Force in 1960 and completed navigator training in January 1961. He flew as a Radar Intercept Officer in the F-101B prior to entering helicopter pilot training. His flying background involves H-21's, H-19's, and CH-3's; he has over 4,000 flying hours. Major Ryon is currently the Operations Officer for the 1551st Flying Training Squadron at Kirtland AFB, N.M.

THE MA

ROLL O

AS OF 1 JA

750,000

436 MAW

600,000

76 MAS

500,000

63 MAW 89 MAW

400,000

14 MAS 75 MAS

300,000

3 MAS 30 MAS
7 MAS

250,000

99 MAS

200,000

4 MAS 86 MAS
15 MAS 98 MAS
57 MAS

100,000

6 MAS 54 WRS
9 MAS 55 WRS
53 MAS 446 MAW (Assoc)

FLYER

F HONOR

UARY 1976

25 YEARS OR MORE

89 MAW
98 MAS
99 MAS

20 THROUGH 24 YEARS

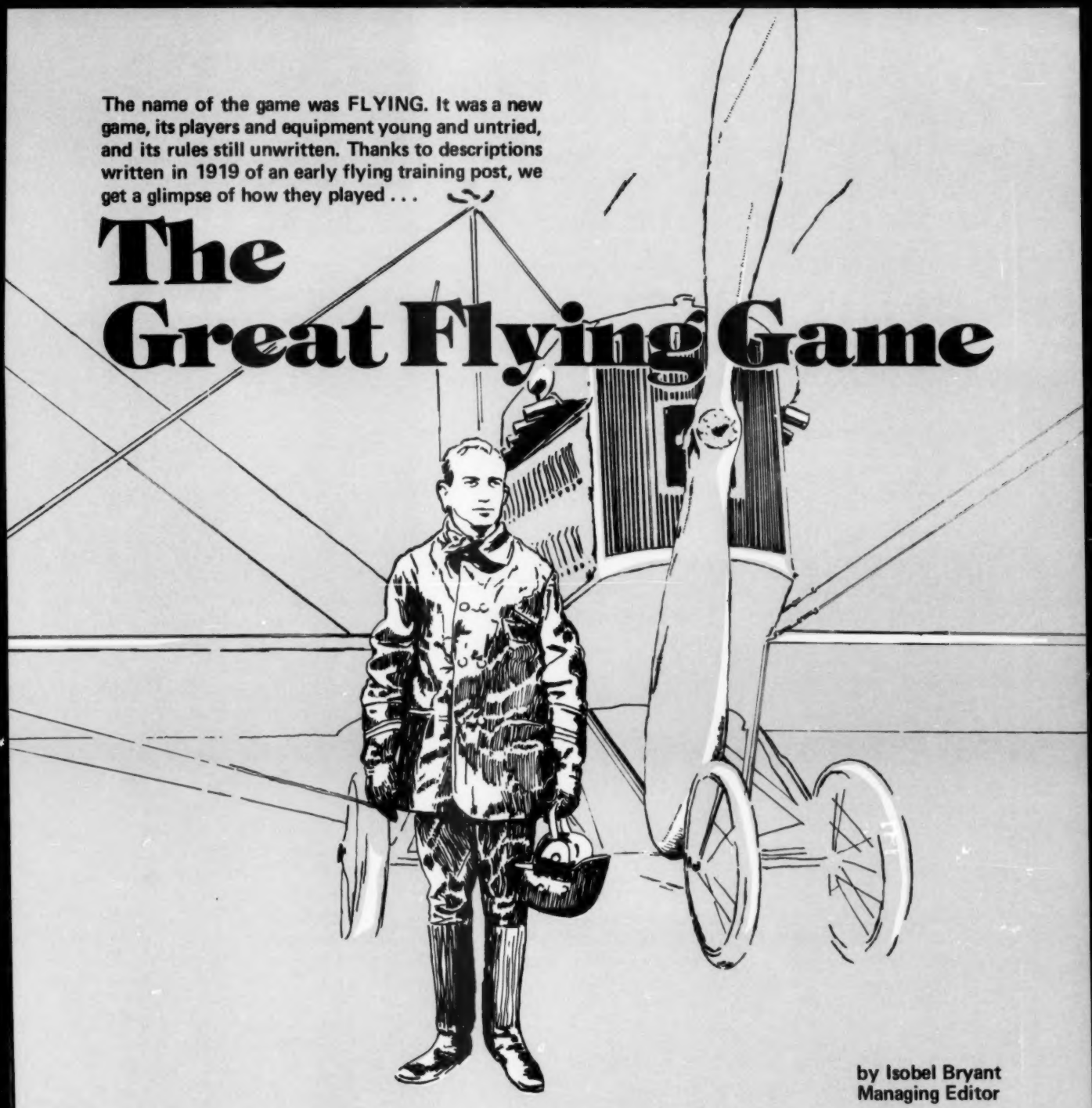
76 MAS
170 TAG (ANG)
913 TAG (AFRES)
924 TAG (AFRES)

10 THROUGH 19 YEARS

3 MAS
7 MAS
14 MAS
30 MAS
Det 1, 39 ARRW
Det 11, 39 ARRW
Det 15, 39 ARRW
Det 18, 39 ARRS
41 ARRS
Det 5, 48 ARRS
53 MAS
54 WRS
55 WRS
55 ARRS
57 MAS
67 ARRS
75 MAS
97 MAS (Assoc)
145 TAG (ANG)
166 TAG (ANG)
167 TAG (ANG)
172 TAG (ANG)
301 ARRS (AFRES)
303 ARRS (AFRES)
305 ARRS (AFRES)
403 ARRW (AFRES)
436 MAW
440 TAW (AFRES)
459 TAW (AFRES)
728 MAS (Assoc)
914 TAG (AFRES)
927 TAG (AFRES)
940 TAG (AFRES)

The name of the game was FLYING. It was a new game, its players and equipment young and untried, and its rules still unwritten. Thanks to descriptions written in 1919 of an early flying training post, we get a glimpse of how they played . . .

The Great Flying Game



by Isobel Bryant
Managing Editor

John Henry "Jack" Creedon, in the last stage of training, while making a long cross-country flight, developed motor trouble. In gliding for safety he chose a nice farm house in the distance for his stopping place. True to his usual habit, he hit the mark but; coming at right angles to two buildings, close enough to place the tail on the roof of one and the nose of the ship on the roof of the other, he had to do a right face with his ship to properly execute this very difficult landing. But Jack did it, and more unusual still, he glided through a well-limbed tree near by so that his speed would be completely checked at the right point. "Jack" did that and the occupant of the house was more excited than the pilot, who climbed down the side of the kitchen wall.

—Scott Field Yearbook, 1918

This extraordinary landing was executed in late 1917 by a student pilot being trained at Scott Field, now Scott Air Force Base, for service in World War I. After entering the war in April of that year, the United States government had set up a huge aircraft production and pilot training program. Army barracks bulged as young men responded to posters urging them to JOIN THE ARMY AIR SERVICE—BE AN AMERICAN EAGLE! But, although the men wanted to soar, the lack of planes, training facilities, and instructors kept them bound to earth.

As the country's war machinery gained momentum, the government chose several sites for flying training units. One of the new fields was in the middle of the flat farmlands of southern Illinois; they named it in honor of Corporal Frank S. Scott, killed in 1912, an aviation pioneer, expert mechanic, and the first enlisted man to lose his life in an aircraft accident.

In August 1917, eager cadets and instructors began arriving at Scott. Their planes, Standard SJ trainers, were shipped by rail in crates and assembled on post. On the first of September, Scott Field officially opened as a training base for pilots. "Standards" were soon flying above the wheat and corn fields—the "flying season" had begun.

The Flying Game

The flight tower in the center of the flying field became the heart of all activity at Scott. The tower, which gave the instructors a clear view of the ships in flight, closely resembled a tall, wooden judge's stand. Flying, even in preparation for combat, was considered a great sport, with the instructors judging the progress of their students in "the great flying game." Beneath the flight tower, cadets sat "warming the benches," waiting for their turn in the cockpit. The constant ringing of the telephone with messages for those in the center of the field, cadets shouting their assignments, officers giving instructions through giant megaphones, the babble of talk, and the jumble of shouts probably made it the noisiest as well as the noblest game in town.

The Flying Machine

The gawky "Standards" actually possessed a good degree of stability and response in the air. Gentle enough planes to handle, they had a tendency to catch fire and were therefore soon discarded by the Army. Their replacement was the Curtiss "Jenny," whose original eight cylinder engine could propel the eager craft at 75 miles an hour. With the gas tank filled to its 21-gallon limit, Jenny could rumble along for two and a quarter hours. But it was seldom that she stayed aloft for so long. Either her tendency to spin if at all mistreated or her unreliable engine usually forced the pilot to the ground long before the fuel ran out.

"Keep the Ships in the Air" was the slogan at Scott. The mechanics and machinists who assembled the aircraft, kept them in repair, and made the spare parts which saved shipping time were perhaps not as noisy as the aviators, but they were just as busy and as proud of their part in the great flying game. Part of their job was to see that each engine was removed from the plane after 100 hours of flying time, torn down, and overhauled.

In the Dope House, the linen covering of the wings, fuselage, and other parts of the planes were treated with a gluey fluid which prolonged the life of the cloth cover of the framework, making it waterproof, airtight, and as streamlined as possible. However, the "dope" had one serious drawback—cows loved the taste of it. So a pilot had to be choosy about what field he landed in or he'd soon find his plane licked clean of its protection.

The Flying Season

Soon after training began at Scott Field, a few cadets were ready for their cross country work. On a bright, sunny day and after a brief lecture, the first class of nine students were assigned their ships and, at intervals of five

minutes, each started out alone, the destination being a field about 45 miles away. The nine made the trip and returned successfully. The second trip, in a different direction, was equally successful. On the third, however, quite a stir was made by one cadet—our friend "Jack" on the two rooftops.

Stunt flying was not permitted during training. However, it was well known that the citizens of the small towns nearby were often treated to beautiful exhibitions—usually on those days that the cross country class was out alone. As a whole, few men got lost while making trips. However, there were cases of pilots getting hopelessly lost and landing for gas—invariably where there were pretty girls and lots of good country food.

Formation flying consisted mainly of straight line and V formations. First, the men were sent up in pairs to do "tail-chasing," in order to become accustomed to being near another plane in the sky. After several hours of this, larger formations of six to 12 ships, commanded by an instructor, were sent up to practice the formations until they were proficient. The finishing touches of gunnery and aerobatics would be provided later by French instructors experienced in combat.

By mid-December, 24 cadets had been commissioned, and training ended for the winter. Then in April, the 1918 "flying season" opened as warm weather arrived along with a new batch of youthful, would-be pilots.

Some days brought disaster. One cadet, after waiting all morning for a machine, finally took off in an apparently good one. However, the engine began missing as he approached two sets of wires that ran along the sides of the railroad tracks at the end of the field. He zoomed the first set and tried to go under the second, but got tangled in the wires instead. All telegraph and telephone connections to the west were destroyed, the ship was turned on its back, and the cadet suffered a broken leg.

Most of those that safely made it through their training went overseas to join the other rugged individualists of the open cockpit, the war eagles in helmet and goggles with the white silk scarf fluttering in the slipstream. A few were needed more at home. The word had come down from above. "Too many accidents," said Washington officials. "Choose the best men for instructors." So some good men glumly remained behind to take an instructor's course and serve a stint teaching others to fly before they too could leave for France and their chance to "meet the Hun."

By the fall of 1918, America was capable of turning out a thousand aircraft a month and its Air Service had grown to a major force. But as the American effort achieved these heights, the war ended. Almost overnight the whole elaborate military structure was disbanded. Orders were cancelled, factories closed, pilots grounded. At Scott, it meant an end to the program which had trained 268 pilots.

The glamor of that early combat pilot faded into history, and there came a lull in the flying game. But soon a new type of airman flew over the wheat fields and cow pastures of the middle west—the barnstormers, the racing pilots, and the stuntmen of the twenties, who would create the daredevil, madcap era of the great flying game.

Bits and Pieces

by Capt Bruce L. Gumble
Associate Editor

Trivia question: What was the name of Red Ryder's sidekick?
Response: That's easy. "Li'l Beaver."

Question: How many engines did a C-87 have?
Response: Huh??

The history of the airlift business is a tremendous one, full of adventure and heroism: the daring pioneers who first flew the mail; the hardy men who blazed the trails to Europe and the Far East during World War II, flying the Hump and later the Berlin Airlift; and then, the leap into the jet age—all very heady stuff. You're probably familiar with most of it.

But sometimes the most interesting aspect of history lies in stories seldom told, those peripheral incidents that are often neglected when the major story is being chronicled into heavy tomes. The total history of air transport is full of bits and pieces of this nature.

For that reason, this article concentrates on the "sidelights" rather than the "spotlight" of the airlift business.

What's in a Name?

Every MAC crew member surely knows that at one time MAC was "MATS" (Military Air Transport Service). Even the first C-141's had the MATS logo on the tail. But did you know that we were almost named "AFATS," for Armed Forces Air Transport Service?

As a matter of fact, the first time the acronym "MATS" was used, it meant Mediterranean Air Transport Service. Yes, names change. Travis AFB was once known as Fairfield-Suisun Army Air Base (so that's the reason for the SUU ident!). And an occasional history book refers to "Lagens Airfield" on the island of Terceira in the Azores.

Another sharp reminder of how times have changed is a system timetable, published by Air Transport Command in August 1946. It was emblazoned "The Army's Airline." One of the scheduled flights was "The Moose," a part of the Totem Pole Route, which was operated daily from Great Falls, Montana, to Ladd Field in Fairbanks.

Flying safety was important then too, and a 1943 Air Transport Command annual report proudly points to an accident rate declining to 0.8 by November 1943. That looks pretty good when you compare it to MAC's annual rate of 1.0 thirty years later—until you look at the fine print and see that the rate was 0.8 accidents per 1,000 hours, not the 100,000 hours we use now.

Even with the difference in accident rates, some of the safety problems remain the same. You read about the men who established the South Atlantic air route and their battle with the birds of Ascencion Island. Great numbers of nesting birds made operations extremely dangerous, and all sorts of ideas were tried for getting rid of them—including the importation of a planeload of cats. Unfortunately, the island was also the home of a larger and stronger species of bird, which promptly devoured the luckless felines.

Women's Lib — 1940's Style

Today, the idea of women entering USAF pilot training seems novel and daring—until you read about the more than 1,000 American women pilots of World War II. They flew everything from P-38's to B-24's, ferried nearly 13,000 aircraft across some of the world's toughest and most primitive

air routes, flew as instrument instructors, towed targets, and, later, tested rocket aircraft and flew jets. A far cry from the ideas of Army planners who, in 1939, envisioned the use of women as "hostesses, librarians, canteen clerks, cooks and waitresses, chauffeurs, messengers, and strolling minstrels."

But probably the greatest fascination of all comes from the aircraft themselves, the tools of the trade. If you barely remember the C-124 and never heard of the C-82, you'll be surprised to discover that every number from C-1 through C-142 has been assigned to one aircraft or another at some time in the history of U.S. military aviation. Some were never built; some existed only as prototypes or were built in limited numbers. But other little-remembered airplanes such as the C-53 and C-87 performed yeoman service everywhere from the Hump to Berlin. Different models of the venerable Gooney Bird carried at least ten different designations; some of the Gooneys were still in service in 1962 as the VC-117.

Familiar names stand out on the list of C-type aircraft: Lockheed, Douglas, Boeing, Convair, Fairchild. Others are almost unheard of: Kreider-Reisner, Rearwin, Harlow, Akron-Funk. Still others, applied to American transport aircraft, are startling: Sikorsky, Junkers, Fokker, Messerschmitt.

Second Time Around

Some of the numbers are familiar because it's their second time around. In 1925 a C-5 pilot had three propellers to work with instead of four turbofans; his airplane weighed less than six tons and was manufactured by Atlantic Aircraft Corporation from a Dutch Fokker design. A C-7 pilot of that era flew a different version of the same airplane; and C-14 or C-15 pilots of the future will find that their predecessors flew single-engine Fokkers. The original C-9? A Ford Trimotor.

The roll call of old aircraft turns up some interesting precedents. The Cox-Clemin XA-1 was built about 1924 as a flying ambulance; it was a single-engine biplane with room for two stretcher patients and a medical officer. Another innovator was the C-82, a forerunner of the C-119. Designed in the early 1940's, it incorporated clamshell doors for drive-on/drive-off vehicle loading, a cargo floor at truckbed height, and a drogue chute extraction system for air-dropped loads.

Some airplanes never got

The XC-99 flew operational missions from 1949 to 1957.

Twenty-seven Boeing C-73's were built. They were used primarily for carrying troops during early WW II, later converted to trainers.

far enough to acquire the "C" designation. An Office of War Information news release dated June 7, 1943, speaks of the Kaiser-Hughes HK-1 Flying Boat: "A giant, all-plywood ship . . . 400,000 lbs. gross weight, being built primarily for cargo-carrying . . . eight engines . . . 120,000 pounds cargo capacity . . . cruising speed 174 miles per hour . . . 320-foot wing spread . . ."

Another sky giant was the XC-99, now on static display in San Antonio. It flew special operational missions from 1949 to 1957; its planned load capacity was 101,000 pounds. Derived from the B-36, it was 70 feet greater in wingspan and 40 feet longer than a C-141 and weighed 5,000 pounds less.

You find that some things you once believed just aren't so. Most people remember the C-124 as "Old Shakey," but think of its official name as the Globemaster. In fact, the venerable Shakey was Globemaster II; the Globemaster I designation belongs to its forerunner, the C-74, of which 14 were built between 1945 and 1947.

The C-82, ancestor of the C-119, pioneered drogue-chute extraction of air-dropped loads.

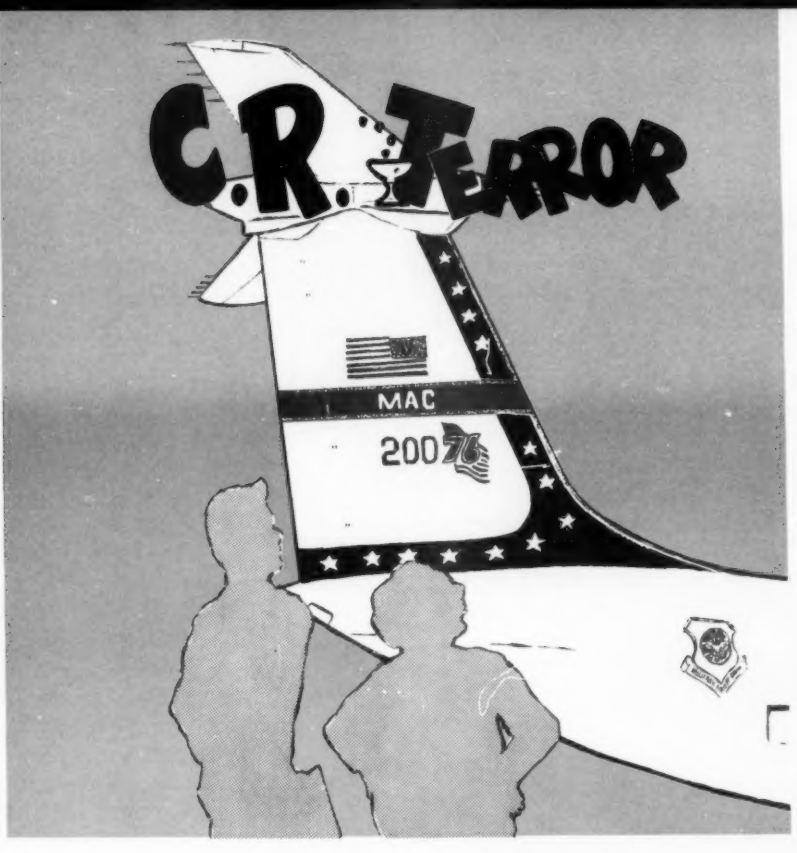
Now you know, trivia fans — a C-87 had four engines.

Jet "Provider"

If you've ever flown a C-123 or talked with anyone who has, you may be aware that this trusty steed is simply a glider with two big recips on it. What you may not know is that the second prototype of the Provider flew in 1951 with four turbojets in underwing pods.

The list of tidbits goes on and on. Even the cargo of the early airlifters is interesting. For example, Air Transport Command flew a cargo of 200 mice from New Guinea to Washington for medical experimentation in 1943. One of the most common cargoes of the war years was duck feathers for stuffing sleeping bags and other insulation. Then there's the story of the aggressive pilot who chewed out the loading crew for leaving his cargo hold practically empty, only to discover that the two apparently insignificant boxes strapped down in the back contained the maximum possible pay load—two and a half tons of mercury.

The small bits of information, the humorous incidents, the unexpected finds among the annals of long ago allow us a look at MAC in a different light. And that's good for perspective. Perhaps these minor memorabilia bind us to our traditions as closely as do the proud tales of the Berlin Corridor, the Jolly Greens in Southeast Asia, and Operation Homecoming.



Wuzzitt? Phooey!" C.R. babbled into the telephone. "Who dares to call me at this hour!?" C.R. looked at his Rolex Oyster Perpetual—nine a.m.

"C'mon, Boss," Sam spoke softly, "I tried to get you last night. I even tried the Green Spider and Tassels' place."

"Enough, m'boy," allowed the World's Sleepiest Aviator. "I know this must involve WW III or you would not have disturbed my slumber. Where are we fighting?"

"Nothing like that, Sir," Sammy's voice crackled in C.R.'s throbbing ear. "Major Jefferson's crew all went DNIF with the green apple quick-step and we've got to take his mission . . . a static display for the bicentennial celebration—"

"Oh, no!" the Intrepid Interruptor broke in, "Tassels and I were going to catch the fireworks display off the Battery."

". . . at Tanker Air Force Base," Sam continued. "And, if all goes according to schedule, we'll return to McGourd by 1700 the fourth."

"Hmmm. Tanker. HTTU, the 'Martineek,' " the Bold One reminisced. "Of course, Sammy, you're too young to remember, but—we'll make a trip out of this yet."

"Ah, right, Sir," Long Suffering Sam responded. "We've got a noon show; should put us into Tanker about 1830 their time."

"Tut, tut, number two," C.R. corrected. "We'll chase the shouting winds along en route and be sipping a Terrorific 'tini by six-thirty, m'lad."

•

The C-141 bearing the Liberty Logo superimposed on its tail number taxied toward the Tanker AFB ramp. The World's Most Accurate Aviator would make his block time: 1700, straight up.

"See, Sammy," the Ancient Aeronaut surmised, "we'll have plenty of time to round up a load of fireworks, several cases of Cours Beer, and still hit the Martineek before the dollies begin their nocturnal ritual."

"Gee, Boss, I still don't think it's a good idea." Sam's countenance reflected concern. "Carrying all the beer back to McGourd is bad enough—but hauling fireworks aboard a MAC aircraft has got to be downright dangerous."

"Worry, worry, worry. Number Two, you're gonna get an ulcer," C.R. comforted. Haven't I always taken care of you? Besides, a Bicentennial Fourth of July calls for beer and fireworks. Wouldn't be a celebration without them!"

Sammy raised his eyes heavenward in supplication and then suddenly brightened. "Hey, Boss," he exclaimed, "it's the Blue Devils! The Navy's crack formation and aerobatic team!"

C.R. barely looked up as the formation of brightly painted F-4's pitched out for landing. "Navy, huh? What do they know about flying? They oughtta stick to their boats. The last

In an effort to have a real "bang up" Bicentennial Fourth, our Purple Pimpernel's poor planning personifies pilot's indiscretion.

good aviators the Navy had flew C-130's out of Quagmire. As for the formation and acrobatics bit, Sammy, I wish you could've seen me when I flew slot with the Four Horsemen—"

The World's Loudest Leader's words were masked by the thunder of the last F-4 now passing directly overhead.

•

C.R. was already standing at the bar as Sam walked into the Martineek. With his back to his faithful follower, C.R.'s pudgy fingers made darting, swooping motions as an attractive but skeptical young lady looked on.

" . . . yes, m'little chickadee, you can well understand my plight when we emerged from the unforecast thunderstorm inverted, wrong side up. And acrobatics are prohibited in the C-5. A lesser pilot would have . . . oh, hello, Sammy," The Hyperbolic Heavy Pilot had caught Sammy's outline with his peripheral vision. "I, ah, was, er, telling this young lovely about our trip down here. Belly up and I'll order you a Terrorific 'Tini. Let me introduce you to . . . ah, er (cough) . . . "

"Tina," she smiled. "So you're the major's 'bag boy.' I believe that's what you said, C.R., isn't it?"

"Bartender!" C.R. called hastily. "Food and water for my men and horses!"

•

Sammy cracked the door to C.R.'s room and peered in. The Dynamic Driver was engulfed in a mass of blankets, sheets, and pillows and appeared to be struggling to get free.

Sam stepped over a case of Cours and around the sacks of fireworks at the end of the Old and Restless One's bed.

"Hey, Chief," Sammy shook his boss's shoulder, "it's nearly time to go."

"Go? What? Ugh! Where?"

"Gee, Boss, you don't look well," Sam sympathized. "Why don't you stay in the sack for awhile? I'll run the static display."

"Well, I didn't sleep too well last night," the Tired T-Tail Tooler admitted. "That egocentric firecan jock kinda got under my hide, last night."

"The Blue Devil driver you were talking to when I left?"

"Precisely," C.R. nodded. "That young whippersnapper didn't know the first thing about flying real airplanes. Sure it's easy to do an aileron roll in that Tinkertoy they fly, but it takes a real pilot to perform such a maneuver in a sluggish Starlifter."

"Ah, Chief, you're not thinking about—"

"Not to worry, my son," C.R. interrupted. "Wouldn't think of such a thing with so many witnesses. However, I have a little something up my sleeve that will get the attention of that fuzzy-faced ensign, hee! hee!"

"Uh, oh!" Sam wondered what his Bulgy Boss was thinking.

•

Sammy, Max, and Ty were in place at the static display for a full hour before the Magnificent One appeared.

Sammy eyed his boss' purple flight suit. "Good grief, Chief, what's all that?"

"It's my party suit, from my old Ranch Hand days," C.R. said. "It'll be good for P.R. Let the folks know that they're in the presence of a real 'combat' aviator."

Sam, Max and Ty shook their heads in unison.

"C'mon, you troops," C.R. ordered, "help me get these cartons and fireworks aboard. We can be ready to leap off as soon as the crowd of feather merchants subsides."

•

"Okay, Sammy, I've got the radios," C.R. switched his wafer to VHF 1.

"Tower, 20076. We're number one for takeoff," the Pompous Pilot transmitted. "We'd like to do a max performance takeoff and a high speed pass. Give the remaining kiddies a thrill."

"Roger, seven six; that's approved," Tower crackled. "You're cleared for takeoff. Call five miles inbound for

your flyby."

"Seventy-six rollin'!" C.R. called.

"Sammy, pay attention, now. We'll arch her back, turn her face skyward, and climb out at Vmco," the Gross Gripper of Go-Levers declared didactically. " 'Elegant' is the word they'll use in the press write-ups tomorrow."

The Great Grey and White Bird broke ground at the 3,000 foot marker, and C.R. began to crank in more nose-up trim. As the attitude indicator reached 20 degrees nose up, Sam got a little nervous.

"Hey, Boss," Sammy cautioned, "I'd watch that steep attitude. We could exceed that magic angle of attack and stall the T-tail."

"Angle, schmangle!" C.R. shouted gleefully. "We're not landing on a carrier. Speaking of boats, I'll bet those ensigns are impressed with this."

"C'mon, Boss," Sammy interrupted, "I'd feel a lot better if we'd lower the nose a bit."

"Okay, Sammy," the Bold One sighed. "We've put the impress on all the spectators by now. Help me get her lined up for the flyby."

"Sure, Boss," Long Suffering Sam replied, happy now that they had recovered from their unusual attitude.

"MAC 20076, Tanker tower. Say airspeed on flyby."

"Tell 'em two-fifty, Sammy. Hee, hee." C.R.'s eyes twinkled.

"Hey, Boss, the runway is over to the left." Sam pointed out the windscreen. "You're headed for the ramp."

"Right, Sam," cooed the Omnipotent One. "I've got a bead on the Blue Devils! If only we were Ranch Hands, we could dump a load of 'Purple' on em! Yawhoo!"

The overspeed warning sounded just as the Starlifter passed over the parked F-4's. Sammy caught a quick glimpse of a crew chief diving for cover.

"Now watch this, Number Two," C.R. shouted and yanked back on the yoke while applying left aileron.

As the C-141 approached 45 degrees of bank and 35 degrees nose up, Sergeant Torque broke in, "Major, you're gonna kill us all!"

Sammy looked at his boss. C.R. was as purple as his party suit. "I've got it, Skipper; you don't look so good."

C.R.'s morning-after symptoms, combined with the unusual G forces, were taking their toll. The Purple Pilot nodded to Sam and slid his seat back. With hand over mouth, he departed the flight deck.

•

By the time MAC 20076 arrived at McGourd, the Purple Pimpernel was sufficiently recovered to make the approach and landing. Soon the airplane was neatly chocked and the World's Most Interesting Integral Crew was doing the bag drag. The beer was loaded onto the crew bus, and C.R. was carrying the last sack of fireworks when a speeding staff car caught his eye.

"Sammy, what do you suppose that's about?"

"I dunno, Boss, but he's headed this way," Sam responded. "It looks like Colonel Reamer's car."

"Omigod, Sammy," C.R. blurted. "Stand in front of me! Maybe he won't see my party suit." C.R. dropped the bag of fireworks behind him.

"It's no use, Sir," Sammy said over his shoulder. "He's coming right at us."

"Tell him I stayed at Tanker, or went AWOL; tell him anything!" C.R. nearly sobbed. "Reamer's been out to get me since—"

"Where's Terror?" Colonel Reamer was already out of the blue staff car. "Oh, there you are—trying to hide behind your copilot again. And what the hell are you doing in that unauthorized uniform?!"

"Well, you see, Sir, I spilt soup on my flight suit. Luckily I had this—"

"Never mind, Terror," the D.O. interrupted. "This isn't a social visit. What about this call from Captain Hawser at Tanker? He says you knocked down the grandstands with your jetwash and almost ingested a crew chief! I should have your wings for that!"

"But, Sir," the Pudgy Pilot prayed, "what does a fuzzy-faced company grader know about what's safe or unsafe?

Ask any of my—"

"Stow it, Terror," the colonel reamed. "This captain happens to be a *Navy* captain and an old classmate of mine, as well as commander of the Blue Devils. It'll be a long time before you see the inside of an aircraft again!"

C.R. nervously inserted an Egyptian Oval in his cigarette holder and lit up. "Sir, I'm sure—"

"Terror, what in hell are you doing now?" the D.O. roared. "You know smoking on the flight line is prohibited!"

"Er, of course, Sir, I didn't even realize . . . " C.R. flipped the smoldering cigarette over his left shoulder. "I'm really sorry—"

BAM! KA POW!

"Oh, no!" Sammy yelled in panic, "not into the fireworks!"

All hands hit the deck as a fusillade of fireworks whizzed, banged, and screeched in all directions.

Colonel Reamer lay face down muttering something about DaNang as a can of Cours rolled up and rested against his nose. C.R. had assumed the fetal position.

As the barrage subsided to occasional random popping, Colonel Reamer arose. "Terror! Fireworks and beer! Looks like I got you for sure this time!" He turned to a security policeman, "Read him his rights, Sergeant. Then lock him up!"

The colonel wheeled about and disappeared.

"Sammy," C.R. looked at his faithful follower, "you'd better call Tassels and tell her I can't make it tonight."

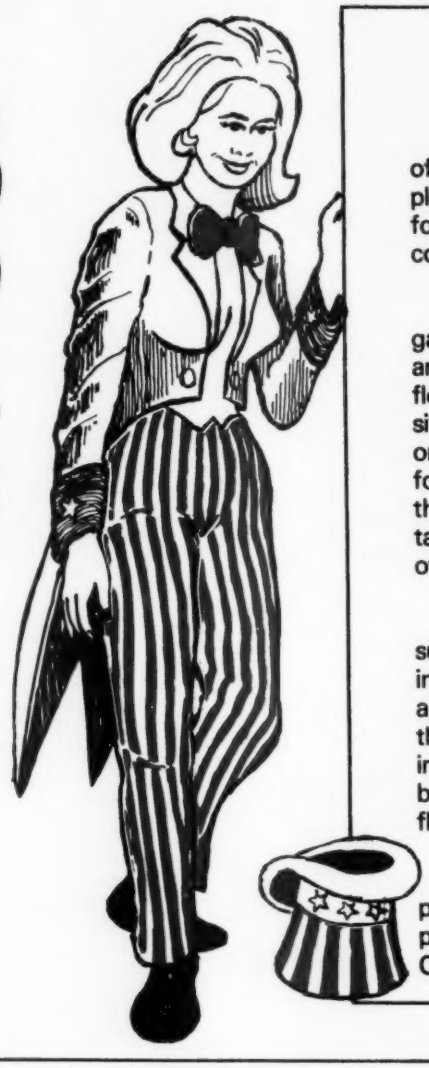
"C'mon, Boss," Sammy comforted, "look at the bright side."

"What could possibly be bright in a situation like this?" C.R. moaned.

"At least you didn't miss the fireworks, Skipper."

"Right, Sammy, in more ways than one . . . in more ways than one!"

Quick Stoppers



Hot Stuff!

Having some hot coffee in the cockpit is one of the comforts of crewing a many-motored airplane. But a crew from another command recently found that it can cause some pretty intense discomfort as well.

The pilot of the big turbojet landed and began to apply brakes. As the aircraft decelerated, an urn of hot coffee came loose from its shelf and flew forward. It struck one of the crew members sitting in an aisle seat, dumped scalding coffee on his chest, groin, and thighs, and then continued forward to strew the rest of its contents over the cockpit floor. The injured crew member was taken to the hospital with second-degree burns over eight percent of his body.

Investigators found that the metal shelf supporting the urn was too small and that its installation had not been properly documented or approved as a modification. They also found that the restraining strap could be loosened by in-flight vibration and that the coffee urn had not been checked for security at any time during the flight.

Familiar objects can easily turn into projectiles inside the aircraft if they're not properly secured. How often have you seen a Dash One or a Form Flying on top of a crew bunk?

Storms in the Desert

Recently, two MAC aircraft received damage while flying in the vicinity of thunderstorms. A VC-135 was departing in thunderstorm activity, but taking a path which radar indicated to be clear, when it was damaged by hail. A month earlier, a C-130 with inoperative radar reversed course to avoid thunderstorms and was struck by lightning on descent. The strike damaged the radome.

Nothing unusual—except that both occurred over the Saudi Arabian desert! Thunderstorms and their associated hazards can occur in nearly any part of the world. Don't ignore the possibility of running into one, even in areas where you wouldn't normally expect them.

A Handful of Herky

The C-130, number two in a flight of five, had just landed behind lead. The landing roll was normal until the pilot positioned the throttles to ground idle and the flight engineer called out to the pilot that number four prop had not entered the ground idle range. The pilot saw that his aircraft was pulling sharply to the left and closing rapidly on lead. He was unable to maintain directional control with the flight controls, and decided that pushing number one throttle forward to flight idle would probably result in a collision with the lead aircraft. By this time, it was obvious that the aircraft was going to depart the runway. The AC rejected the idea of shutting down the number four engine because of the effect the sudden change in power would have on directional control. Using maximum braking and maintaining directional control with numbers one, two, and three throttles, he skillfully steered his bird around the VASI lights and brought it to a stop facing the runway. There was no damage. Cause? A broken sleeve on the number four pitchlock regulator.

How Times Have Changed!

The flying business has gone through a lot of changes in the last half century, and accident boards are no exception, as this 1921 report demonstrates.

Pilot W. D'Courcey-Watney's Nieuport Scout was extensively damaged when it failed to become airborne during takeoff. The original Court of Inquiry found that the primary cause of the accident was carelessness and poor airmanship on the part of a very experienced pilot.

The Commandant General, however, not being wholly convinced that D'Courcey-Watney could be guilty of so culpable a mistake, ordered that the Court should be reconvened. After exhaustive and extensive inquiries and lengthy discussions with the Meteorological Officer, the Court came to the conclusion that the pilot unfortunately was authorized to fly his aircraft on a day when there was absolutely no lift in the air and that he therefore could not be held responsible for the accident.

The court wished to take this opportunity to extend its congratulations to Pilot W. D'Courcey-Watney on his reprieve and also on his engagement to the Commandant General's daughter, which had been announced shortly before the accident.

Gimme a Brake

The write-up was on a prop discrepancy, and a maintenance crew was dispatched to taxi the C-130 to the blast fence for a runup. They completed the before-starting-engines checklist and proceeded to crank up the number three and four engines.

Unfortunately, somebody had changed the brake selector switch from emergency to normal after the checklist was completed. With no brake pressure available, the Herky began to roll. Finding that the brakes didn't do any good, the runup crew moved the throttles into reverse. The airplane stopped—and then started to roll backward. Now the throttles were placed back in forward thrust, and the big bird reversed directions again—but this time it struck the ground power unit and stopped. The crew shut down the engines and evacuated the bent bird.

Qs

Painful Lesson

The C-130 was preparing to depart an overseas station for home. The left-hand locks on a forward pallet could not be engaged, so the pallet was secured by the right-hand locks and two 10,000-pound chains.

This restraint turned out to be insufficient; as takeoff power was set, the pallet shifted rearward approximately two inches. The pilots felt a slight bump, but saw nothing wrong and continued the takeoff. Unfortunately, the loadmaster had been making a last-minute check of the cargo; the shifting pallet trapped his foot, crushing two toes.

Investigators found that, under the circumstances, the chains did not provide sufficient aft restraint to prevent the pallet from shifting. They recommended that pallet restraint with one rail inoperative be the same as the restraint required for floor-loaded cargo.

Whodunit?

Here's one for you mystery lovers. The VC-140 returned from a two-stop mission with a heavy black mark across the bottom of the right wing. The mark was about two inches wide and appeared to be a rubber or plastic material; it started at the leading edge deicer boot, progressed toward the trailing edge, then turned sharply inboard. Some damage to trailing edge fairings was found where the mark terminated.

During the mission, the aircraft had rolled across an approach-end barrier on landing; but the location of the damage proved that the flaps had been up at the time, eliminating the barrier as a cause. It was checked anyway, with negative results. Intensive ramp inspections at all three bases revealed nothing that could have caused the mysterious mark, and the crew noted nothing at all unusual during the mission. Puzzled investigators were unable to determine the cause.

Any of you amateur detectives have a clue?

Explosive Atmosphere

A fuel leak on board an aircraft in flight is enough to get anybody's attention. But a Starlifter crew recently discovered that some situations can be even scarier.

The crew had just departed an overseas station and were climbing through 6,000 feet when they noticed fuel fumes. Checking the cargo compartment, they discovered fuel was leaking from a previously unnoticed crack in the fuel tank of a hydraulic mule. The aircraft was leveled off, and the change in altitude stopped the leak. But now another leak was discovered—this time in a LOX cart.

By this time, the crew was thoroughly convinced that an emergency return was in order. They made an uneventful landing and evacuated the aircraft on the ground; the supercombustible load was impounded.

Reports of fuel leaks in cargo shipments are distressingly common, but the pucker factor in this one is unusually high. Suppose somebody had decided to . . .

after deadline . . .

FLASH POINTING FLASHLIGHTS -- A recent hazard report points out that crew members may not be using explosion-proof flashlights during refueling operations, as required by T. O. 1-1-688. An explosion-proof flashlight must be hermetically sealed and in a rubberized case. Use of all other types is specifically prohibited during refueling operations.

FASTEN SEATBELTS PLEASE -- Two passengers received injuries while on board a MAC airlifter. Weather ahead prompted the aircraft commander to direct everyone to strap in but, apparently, three of the pax thought this was a "simulated" warning and decided not to play the game -- even though they were warned twice. The trio was thrown into the air and two of them were injured when they struck the floor and sidefacing seats.

POSITION AVAILABLE -- Associate Editor for the World's Finest Flying Safety Magazine. What? THE MAC FLYER, of course! Need one each pilot, captain or major. Desired background includes helicopters, C-5, or tactical airlift, or all the above. A journalism or writing background is also desirable, but not mandatory. Applicants should have reasonable writing ability and a strong desire to write. Interested parties should contact: Supervising Editor, THE MAC FLYER, MAC/IGFE, Scott AFB, IL 62225. AUTOVON: 638-3534/5542.

NEXT MONTH --

* "Mm. Hoom. Scroom." is a rather one-sided conversation covering years and years of flying safety -- as told by a veteran MAC aviator. Delightful, entertaining, and runner-up in our short story contest.

* The "Doc" answers some questions posed by a cheeky lad using the pseudonym "Uneasy Rider."

* Red Maple isn't a pseudonym though. He'll tell you of a "brush" with one of the larger birds. Read "Perching Procedures and Problems."

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